

WHAT IS CLAIMED IS:

1. A DC power source unit used as a power source of an electrically powered tool, the tool having a power switch, the DC power source unit comprising:

5        charging means for charging a battery pack used as an alternative power source of the tool;

        a power output switch circuit for switching between supplying the DC power to the tool and supplying DC power to the battery pack for charging the battery pack;

10       a battery condition detecting means for detecting a condition of the battery pack and outputting a condition signal indicative of the condition of the battery pack;

        a controller that receives the condition signal from the battery condition detecting means and determines that  
15       the battery pack is fully charged when the condition signal has reached a predetermined value,

        wherein the controller receives the condition signal from the battery condition detecting means and determines that the battery pack is fully charged regardless of whether  
20       the charging means is supplied with the DC power.

2. The DC power source unit according to claim 1, wherein battery condition detecting means comprises battery temperature detecting means for detecting a temperature of the battery pack, the condition signal output from the  
25       battery temperature detecting means being indicative of the

temperature of the battery pack.

3. The DC power source unit according to claim 1, further comprising measuring means for measuring a non-use period of time during which time the tool is continuously held in a non-use condition, wherein the controller outputs a charge enabling signal to the power output switch circuit when the non-use period of time exceeds a predetermined period of time to allow the charging means to resume charging the battery pack.

4. The DC power source unit according to claim 3, further comprising load current detecting means for detecting a load current flowing in the tool, wherein the controller determines that the tool is in the non-use condition when the load current detecting means does not detect the load current.

5. The DC power source unit according to claim 1, further comprising a trigger detector for detecting that the power switch of the tool is turned ON and outputting an ON signal indicative of ON of the power switch to the power output switch circuit, wherein in response to the ON signal, the controller allows the DC power to be supplied to the tool and prohibits the battery pack from being charged.

6. A DC power source unit used as a power source of an electrically powered tool, the tool having a power switch, the DC power source unit comprising:

charging means for charging a battery pack used as an alternative power source of the tool;

a power output switch circuit for switching between supplying the DC power to the tool and supplying DC power to the battery pack for charging the battery pack; and

a controller that measures a non-use period of time during which time the tool is continuously held in a non-use condition and outputs a charge enabling signal to the power output switch circuit when the non-use period of time exceeds a predetermined period of time to allow the charging means to resume charging the battery pack.

7. The DC power source unit according to claim 6, further comprising load current detecting means for detecting a load current flowing in the tool, wherein the controller determines that the tool is in the non-use condition when the load current detecting means does not detect the load current.